

- c) The **slope** of the flowpath segment must be no steeper than 15% for any 20-foot reach of the flowpath segment.
 - d) The flowpath segment must be located between the dispersion device and any **downstream drainage feature** such as a pipe, ditch, stream, river, pond, lake, or wetland.
 - e) The flowpath segments for adjacent dispersion devices must be sufficiently spaced in order to prevent overlap of flows in the segment areas. The **minimum spacing** between flowpath segments is specified for each dispersion device in subsequent sections, and includes an exception made in cases where sheet flow from a non-native pervious surface overlaps with other flowpath segments.
4. For *sites* with **septic systems**, the discharge of runoff from dispersion devices must be located down slope of the primary and reserve drainfield areas. DDES permit review staff can waive this requirement if site topography clearly prohibits discharged flows from intersecting the drainfield.
 5. Dispersion devices are not allowed in critical area **buffers** (unless approved by DDES) or on **slopes** steeper than 20%. Dispersion devices proposed on slopes steeper than 15% or within 50 feet of a **steep slope hazard area** or **landslide hazard area** must be approved by a **geotechnical engineer** or **engineering geologist** unless otherwise approved by the DDES staff geologist.
 6. The dispersion of runoff must not create **flooding or erosion impacts** as determined by the DDES. If runoff is discharged toward a **landslide hazard area**, **erosion hazard area**, **steep slope hazard area**, or any slope steeper than 15%, DDES may require evaluation and approval of the proposal by a **geotechnical engineer** or **engineering geologist**.

C.2.1.2 DELINEATION OF NATIVE VEGETATED AREA FOR FULL DISPERSION

The area of **native vegetated surface** used for full dispersion must be delineated as a "**native growth retention area**" on the flow control BMP site plan that will be attached to the required declaration of covenant and grant of easement per Requirement 3 of Section C.1.3.3. Delineation of the native growth retention area is subject to the following **restrictions**:

1. The principle restriction on native growth retention areas is **removal of vegetation and trees**. All trees within the native growth retention area at the time of permit application shall be retained, aside from approved timber harvest activities and the removal of dangerous and diseased trees.
2. The native growth retention area may include any *unsubmerged*¹⁵ critical areas and any critical area buffers.
3. The native growth retention area may include previously cleared areas replanted by the proposed project in accordance with the **native vegetated landscape** specifications in Section C.2.1.8 (p. C-35).
4. The native growth retention area **may be used for passive recreation** and related facilities, including pedestrian and bicycle trails, nature viewing areas, fishing and camping areas, and other similar activities that do not require permanent structures, provided that cleared areas and areas of compacted soil associated with these areas and facilities do not exceed eight percent of the native growth retention area.
5. The native growth retention area **may contain utilities and utility easements**, including other flow control BMPs, but not septic systems.

Note: the Public Benefit Rating System (PBRs) provides tax credit for properties that preserve 4 acres or more of contiguous open space in rural areas. Additional credits are granted under the forested open space category, provided a Forest Management Plan is developed that maintains the open space in a fully forested condition.

¹⁵ *Unsubmerged* means outside the ordinary high water mark of streams, lakes, and wetlands.

C.2.1.3 USE OF SPLASH BLOCKS FOR FULL DISPERSION

Splash blocks such as that shown in Figure C.2.1.A (p. C-30) may be used to disperse the runoff collected from small amounts of roof area and discharged via a downspout.

Design Specifications

1. No more than 700 square feet of roof area may be drained to a single splash block unless the native vegetated flowpath segment is longer than the 100-foot minimum length specified in Minimum Requirement 3 of Section C.2.1.1.
2. A maximum roof area of 1,400 square feet may be discharged to a single splash block if the native vegetated flowpath segment is at least 200 feet in length. *Note: for roof areas larger than 700 square feet, the splash block should be located away from building or other provisions should be made to prevent flooding/erosion problems.*
3. For roof areas of between 700 square feet and 1,400 square feet, the length of the flowpath segment may vary proportionally between 100 and 200 feet.
4. For purposes of maintaining adequate separation of flows discharged from adjacent dispersion devices, the native vegetated flowpath segment for the splash block must have at least 50 feet of separation from an adjacent flowpath segment at the downstream end of whichever segment is the shorter. **Exception:** where sheet flow from a non-native pervious surface overlaps with the flowpath of a splash block, the splash block flowpath segment must be extended at least 1 foot for every 3 feet of non-native pervious surface area **width** draining to the same flowpath. *Note that width is measured in the general direction that runoff flows across the non-native pervious surface.*

C.2.1.4 USE OF ROCK PADS FOR FULL DISPERSION

Pads of crushed rock, 2 feet wide (perpendicular to flow) by 3 feet long by 6 inches deep, may be used as a dispersion device to discharge small amounts of concentrated runoff from impervious surface or non-native pervious surface.

Design Specifications

1. No more than 700 square feet of impervious surface may be drained to a single rock pad unless the native vegetated flowpath segment is longer than the 100-foot minimum length specified in Minimum Requirement 3 of Section C.2.1.1 above. If the developed surface is non-native pervious surface other than pasture, no more than 2,500 square feet may be drained to a single rock pad with a 100-foot native vegetated flowpath segment. For pasture, the maximum is 8,000 square feet. Combinations of different surfaces draining to a single rock pad are allowed provided that the sum of each surface area divided by its maximum (e.g., impervious area divided by 700) is less than or equal to 1.0.
2. A maximum impervious surface area of 1,400 square feet may be drained to a single rock pad if the native vegetated flowpath segment is at least 200 feet in length. For non-native pervious surface other than pasture, the maximum area is 5,000 square feet. For pasture, the maximum is 16,000 square feet. Again, combinations of different surfaces are allowed as explained in Item 1 above.
3. For impervious surface areas of between 700 and 1,400 square feet, the length of the flowpath segment may vary proportionally between 100 and 200 feet. This variation is also allowed for non-native pervious surfaces (i.e., between 2,500 and 5,000 square feet for surfaces other than pasture, and between 8,000 and 16,000 square feet for pasture).
4. For purposes of maintaining adequate separation of flows discharged from adjacent dispersion devices, the native vegetated flowpath segment for the rock pad must have at least 50 feet of separation from an adjacent flowpath segment at the downstream end of whichever segment is the shorter. **Exception:** where sheet flow from a non-native pervious surface overlaps with the flowpath